

## Sir Thomas Lewis: a view from the south

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Family ties are still stronger in Argentina than in the northern hemisphere. It should not then come as a surprise that I pretend, albeit naïvely, to belong to a most illustrious electrocardiographic family. In a colloquial lecture on the history of electrocardiography delivered for the Argentine society of Cardiology in 1973, I referred to Wilson as the father, Einthoven as the grandfather, and Sir Thomas Lewis as the rich uncle from abroad. Where tradition is not fully developed, it is no great sin to borrow where there is a plenitude. The time had finally come to pay an old debt, and to offer a belated but necessary explanation. The opening page of the Spanish edition of "Los Hemibloqueos"—its frontispiece, as I like to

call it—was made up by using Fig. 4 of *The Mechanism and Graphic Registration of the Heart Beat*, 3rd ed published in 1925, as reproduced in this article. A huge heart of a walrus, probably dissected by Professor Keith himself, exhibited the most beautiful, indeed the largest, two divisions of the left bundle-branch that I have ever seen in a mammal heart. Why did Lewis choose this remarkable anatomical specimen? Did he really suspect that such anatomical distribution of the left bundle-branch might be important, or was it just the intuition or clairvoyance of a great man? The first time I saw this illustration it helped me to conceive the idea of the trifascicular nature of the conduction system. What is

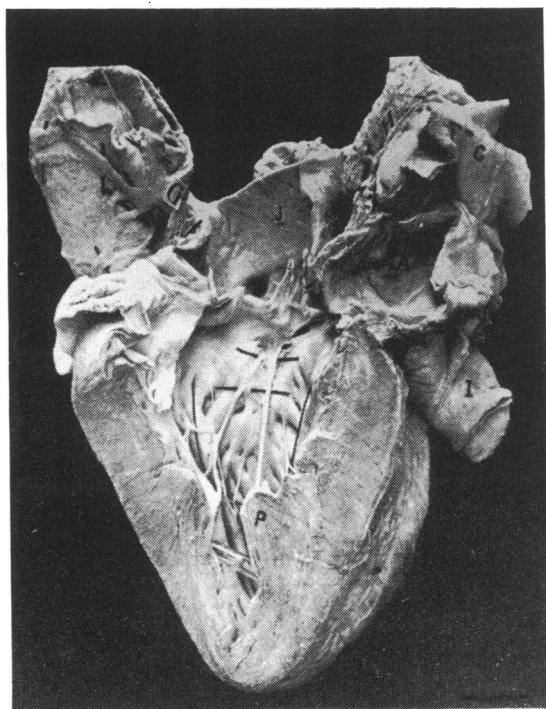


Fig. A specimen in the Royal College of Surgeons' Museum, photographed with the kind permission of Professor Keith. The heart of a walrus dissected from the left side. The greater portions of the wall of the left ventricle and left atrium (A) have been removed and the aorta has been divided vertically at its base (J) and the left half taken away. The interventricular septum and the cusps of the aortic valve are exposed. The right anterior cusp of the valve is fully exposed and the mouth of the right coronary artery is seen. Directly beneath the posterior end of this cusp (to the right in the figure), the left division of the atrioventricular bundle enters the ventricle and immediately splits into two main branches; these branches lie upon two horizontal bristles, over which there has been a very small mount of dissection. The further course of these branches is perfectly clear, the arborisation consisting of free strands which cross the cavity; several large branches enter the papillary muscles, the bases of which are seen (P). Two long bristles are placed behind finer branches of the coarse network. I lies on the inferior cava; G on the pulmonary artery. Note the large collections of nerve tissue at the base of the heart; bristles are placed behind the thick strands at G, H, and C. (Originally Fig. 4 in *The Mechanism and Graphic Registration of the Heart Beat*, 3rd ed, published in 1925.)

however clear is that, when I decided to open *Los Hemibloqueos* with this illustration, there was no better or less prejudiced demonstration available of the bifascicular character of the left bundle-branch. Minor debts may just as well be paid here, and I would like to comment briefly on Fig. 376 in Lewis's book, in which "overdrive suppression" caused by runs of ventricular ectopic activity and giving rise to Adams-Stokes attacks, is beautifully depicted. This one I used freely in the St Cyres Lecture on "Paroxysmal atrioventricular block and the mechanism of Adams-Stokes attacks", which I gave in London in 1977. This shows again how rewarding it can be to go back to Lewis's book when looking for information and ideas that may still be pertinent and valuable.

I am certainly not alone in periodically going through Lewis's book (of his many books, *The Mechanism* . . . is certainly *the* book), and this brings

up a story which may also be told here. When I first presented my ideas on the trifascicular concept in the presence of the late Louis N Katz in Chicago, he said: "What you just have presented is beautiful; the only problem is that it is not true"; to which I quickly responded "Wilfred Trotter once remarked that there is no more powerful antigen than a new idea: it provokes strong responses in those exposed". He laughed heartily. A couple of years later we met in San Francisco and, to my great surprise, he told me: "You were right; I was persuaded by having a look at Fig. 4 in the Lewis book." At that age, he was still reading the gospel!

Am I not entitled to boast about the legacy I obtained from Sir Thomas?

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